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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,029	01/28/2004	Liu Jun Zhang	12553/101	4738

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EXAMINER

DAVIS, DAVID DONALD

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/767,029

Applicant(s)

ZHANG, LIU

Examiner

David D. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-30 is/are allowed.
- 6) ☐ Claim(s) 1 and 6-13 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1, 6-8, 12 and 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Inaba (US 5,844,753). As per claim 1, Inaba shows in figure 3 a system for manufacturing a hard disk drive arm 10 including a U-shaped connector 8 to couple a relay flexible cable to a voice coil carriage assembly. The U-shaped connector 8 includes a plurality of generally parallel plates, as shown in figure 1. The parallel plates include at least one bonding pad 6 to electrically couple the relay flexible cable to a head gimbal assembly (HGA) flexure cable.

As per claim 6, in column 3, lines 50-56 Inaba discloses the bonding pad 6 coupled to at least one connecting pad 13 on HGA flexure cable by a conductive bonding agent. As per claim 7, column 3, lines 50-56 of Inaba also discloses the bonding agent including a plurality of electrically conductive particles. As per claim 8, column 3, lines 50-56 additionally discloses the bonding agent being compressed between bonding pad 6 and connector pad 13, and a number of particles form an electrical path between the bonding pad 6 and the connecting pad 13.

As per claim 12, Inaba shows in figure 3 the U-shaped connector 8 having four bonding pads 6 and the HGA flexure cable having four connecting pads 13. As per claim 13, Inaba discloses in column 3, lines 50-56 that bonding pads 6 and the connecting pads 13 are gold coated.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba (US 5,844,753). Inaba discloses the claimed invention. See description supra. However, Inaba is silent as to an Anisotropic Conductive Film (ACF), a voice coil carriage assembly being molded polymer resin or stamped from aluminum.

Official notice is taken of the fact that ACF and a voice coil carriage assembly being formed from resin or aluminum is notoriously old and well known in the disk drive art.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to utilize an Anisotropic Conductive Film (ACF) and resin or aluminum in a voice coil carriage assembly as taught in the art in the system of Inanbe. The rationale is as

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follows: one of ordinary skill in the art at the time the invention was made would have been motivated to utilize Anisotropic Conductive Film (ACF) and resin or aluminum in a voice coil carriage assembly, which is well within the purview of a skilled artisan and absent an unobvious result, because of the materials are able to be readily procured and easily utilized during the manufacturing process.

Allowable Subject Matter

6. Claims 27-30 are allowed.
7. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed June 28, 2006 have been fully considered but they are not persuasive. In the first paragraph on page 7, applicant curiously asserts that there is "no specific citation from the Office Action as to what it regards as "parallel plates". As stated supra, the parallel plates (i.e. plates that extend in the same direction, equidistant at all points, and never converging or diverging is clearly shown in figure) include at least one bonding pad 6 to electrically couple the relay flexible cable to a head gimbal assembly (HGA) flexure cable.

In page 7, applicant contends several times that "the entire description of Figure 1 does not include the description of . . . the parallel plates". It should be noted that the rejection supra does not refer to the description of figure 1, but the diagram, picture or drawing illustrating the

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textual material of Inaba, i.e. figure 1 itself. And contrary to applicant's assertion Inaba and figure 1 of Inaba shows the parallel plates and U-shaped connector of the claimed invention.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

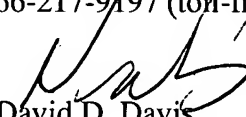
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is 571-272-7572. The examiner can normally be reached on Monday thru Friday between 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David D. Davis
Primary Examiner
Art Unit 2627

ddd